

Indicators of Neighborhood Stress

Background

The individual data items that comprise the Composite Stress Index were selected after an extensive literature review on social indicators as predictors of community needs. The variables selected reflect the physical and social conditions indicative of dependency and need and are related to economic status, shelter costs and conditions, as well as possible social dependency (i.e., youth, old age, disability; see Appendix 1).

This approach is unique to the City, so far as we know, as it did not exist in the literature. The planning staff developed this approach 15 years ago. These variables were originally selected in 1983 for their utility in assisting the Community Development Block Grant process, especially in prioritizing needs: that is, variables were limited to information reflective of housing and family needs typically addressed by CDBG programs. Each variable contributed equally to the overall composite score - there was no theoretical basis for differential weighting that we found credible.

Our review of the literature did not reveal any National standards or thresholds upon which neighborhoods might be judged or weighed. We did not find theory or practice, attractive to us, which might tell leaders when an area needed assistance. These decisions are innately political in that they involve the distribution of public monies and goods. We found no mathematical substitute for human judgement.

Given these facts, staff decided that all one could do was measure the City's "neighborhoods" against the average condition of the City as a whole. Thus, the statistical method used simply measures areas in standard deviation units from the mean of the City. Because of this, it is difficult to say from one decade's census to the next whether or not an area "improved" other than to say that its rank may have changed up or down relative to the City average for these factors.

Individual scores were standardized or normalized to remove differences in scale and variation among the variables. This process created variables whose means are zero and whose standard deviations are ± 1.0 . An overall or composite score was obtained by averaging all 31 scores. The higher the score, the greater the social and housing related "stress" in the area. Areas with scores greater than the average for the City were deemed to be "stressed." The degree of stress is indicated by the score, that is, the standardization process gives scores in standard deviation units. A score of +1.5 indicates that, on average, over 31 measures, the area's composite score was 1.5 standard deviation units greater than the mean score of the City. There is no consideration of whether the City's condition is good, bad, or indifferent. These data reflect only population and housing variables. Highly relevant matters such as nutritional status, health status, recidivism, crime, etc., were not included in this approach as used in 1983 and 1992 following the release of census data from the sample portion of the census at block group level.

Caveats

Caution must be exercised in the use of these data and interpretations of their meaning. The indicators of neighborhood stress are provided to assist in fuller assessments of areas to be supported by community resources. These scores have no agenda. The scores and rankings of “neighborhoods” [actually census block groups which are of neighborhood scale but might not be neighborhoods *per se*] are intended to be used as supporting facts and are not intended to be used as a substitute for human judgment. Areas scored as having very low need or dependency may in fact have serious problems concerning issues or subjects outside the scope of this study. Conversely, areas with very high scores indicative of great need and dependency may have healthy, vital households. These scores are not qualitative assessments of an area’s spirit or vitality; rather, these scores are simple, mathematical indicators of population and housing facets indicative of need. This instrument is only one factor to be considered in evaluation of an area. Depending upon the program in question, other factors should also be considered, such as health, nutrition, crime, other programs in place, and the organizational resources or assets of any neighborhood group.

APPENDIX 1 - NEIGHBORHOOD STRESS ELEMENTS

Neighborhood Stress scores are based on information obtained from the 1992 City of Tucson Indicators of Neighborhood Stress report. The Report provides an index of population and housing characteristics that can be used as supporting information in targeting areas for housing rehabilitation and implement programs to support and nourish those in need. The Report identified 31 data items from the 1990 Census which were judged the best indicators of social dependency and housing need. The specific factors identified in the Report include the following:

1. Minor Population

Persons 18 years old or less as a percentage of the total population.

2. Elderly Population

Persons aged 65 years or more a percentage of the total population.

3. Minority Elderly Population

Persons aged 65 years or more who are not White, non-Hispanic as percentage of the total population.

4. Pre-School Index

Children 5 years or less as a percentage of the total youth population aged 18 years or less.

5. Dependency Index

Ratio of youths (18 years or less) and elderly (65 years or more) to working age persons (19 - 64 years).

6. Fertility Index

Number of children less than 5 years of age per 1,000 women aged 15 to 44 years of age.

7. Language Disability

Persons 18 years and over who do not speak English well or at all as a percentage of the population aged 18 years and over.

8. Mobility Disability

Civilian, noninstitutionalized persons 16 years and over with a disability limiting mobility and selfcare as a percentage of all civilian, noninstitutionalized persons 16 years and over.

9. Work Disability

Persons aged 16 to 64 years of age with a work disability as a percentage of all persons 16 to 64 years of age.

10. Poverty Status - Persons

Persons below the poverty level as a percentage of all persons for whom poverty status is ascertained.

11. Poverty Status - Families

The number of families below the poverty level as a percentage of all families for whom poverty status is ascertained.

12. Poverty Status - Elderly Persons

Persons 65 years or over who are below the poverty level as a percentage of all persons 65 years or over.

13. Educational Attainment

Persons aged 25 years and over who have completed less than 4 years of high school as a percentage of all persons 25 years and over.

14. Unemployment Rate

Unemployed persons 16 years and over who are in the civilian labor force as a percentage of all persons 16 years and over in the labor force.

15. Not Working in 1989

(replaces a variable used in 1980 which is no longer available) Persons 16 years and over with no employment in 1989 as a percentage of all persons 16 years and over.

16. Working Mothers

Females 16 years and over who are in the labor force and have children under 5 years of age as a percentage of all females 16 years and over with children under 5 years of age.

17. Female Householder

Families who have a female householder with related children under 18 with no husband present as a percentage of all families with related children under 18 years of age.

18. Family Dependency Index

Families that have related children under 18 years and families that have persons aged 65 and over as a percentage of all families.

19. Crowding

Housing units which have more than 1.01 persons per room as a percentage of all occupied housing units.

20. Sanitation/Crowding

Housing units that lack plumbing for exclusive use and which have more than 1.01 persons per room as a percentage of all occupied housing units.

21. Plumbing

Housing units that lack plumbing for exclusive use as a percentage of all housing units.

22. Housing Age

Housing units built before 1940 as a percent of all housing units.

23. Kitchen Facilities

Housing units which lack complete kitchen facilities as a percent of all housing units.

24. Sewage Disposal

Housing units which are not connected to either a public sewer or septic tank as a percentage of all housing units.

25. Source of Water

(Replaces a variable used in 1980 which is no longer available) Housing units whose source of water is either dug wells or some source other than public/private water companies and drilled wells as a percentage of all housing units.

26. Heating Fuel

Occupied housing units lacking adequate heating fuels, i.e., that use fuel oil or kerosene, wood, coal, or no fuel at all, as a percentage of all occupied housing units.

27. Vacancy Rate

Vacant housing units as a percentage of all housing units.

28. Owner Costs

Owner households with incomes less than \$20,000 with owner costs exceeding 34% of their income as a percentage of specified owner occupied housing units.

29. Renter Costs

Renter households with incomes less than \$20,000 with gross rent exceeding 34% of their income as a percentage of specified renter occupied housing units.

30. Communications

Occupied housing units with no telephone and with a householder aged 65 years or over as a percentage of all occupied units.

31. Access

Occupied housing units with no vehicle available as a percentage of all occupied units.

Information about population and housing characteristics is central in the assessment of community needs. These data are necessary but not sufficient in forming a comprehensive strategy for community development and betterment. These data can be used as supporting information in targeting areas for rehabilitation and renewal of the physical housing stock and for implementing programs to support and nourish persons in need.